

## SNF Stabilization and Disposition (RL-0012)

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*IP-2 Container holding K East racks and debris. Use of a newly installed load out station and ERDF ready containers has improved efficiency of debris removal.*

*Debris basket load out via the load out station in K East Basin*



## Overview

This section addresses work in Project Baseline Summary (PBS) RL-0012, *Spent Nuclear Fuel Stabilization and Disposition*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of October 2005.

## Notable Accomplishments

### SNF Stabilization and Disposition (PBS RL-0012)

**Sludge Retrieval and Transfer:** Progress continued ahead of schedule in the K East Basin with 135 of 204 racks (66 percent/+ 17 racks) and 420 of 1594 debris units (26 percent/+65 debris units) removed. Two IP-2 containers holding K East racks and debris units were shipped to the Environmental Restoration Disposal Facility (ERDF) (first IP-2 shipments) on November 15, 2005. The Hose-in-Hose (HIH) sludge transfer subproject completed the installation of all major system components.

**Sludge Treatment:** The Sludge Treatment Project completed implementation of the revised statement of work with British Nuclear Group America (BNGA) on October 18, 2005. The overall treatment system design progressed to 53 percent. However, the transfer system design effort was placed on hold in order to evaluate transfer pump erosion test results.

## Issues

**Sludge Retrieval and Transfer:** The HIH subproject has identified a number of material/fabrication and installation issues that have slowed installation. An engineering task team has been established to review, identify, and provide a continual flow of approved design change notices to construction forces in order to minimize the impact to the progress of installation. The non-conformance report (NCR) process is remedying quality deficiencies. A delay of one month is forecast to complete the HIH installation.

**Sludge Treatment Retrieval and Transfer Design:** Erosion test results on the HIH transfer pumps indicate that pump casing wear may necessitate use of an alternative pump type and/or prevent reuse of the HIH transfer stations. Based on this preliminary information, the design of the retrieval transfer system was placed on hold while alternatives are developed.

**100K Area Seismic Analysis:** An analysis is being performed for the 100K Area evaluating revised seismic criteria and potential changes required for existing facilities. Of particular concern are any effects on the design parameters of the sludge treatment system and facility modifications for the Cold Vacuum Drying Facility. Results of the analysis are expected in January 2006.

## FY 2006 Funds vs. Spend Forecast (\$M)

|         |                                 | Projected FY 2006<br>Funding | FY 2006 Fiscal Year<br>Spend Forecast | Variance |
|---------|---------------------------------|------------------------------|---------------------------------------|----------|
| RL-0012 | SNF Stabilization & Disposition | \$ 122.9                     | \$ 117.1                              | \$ 5.8   |
| Total   |                                 | \$ 122.9                     | \$ 117.1                              | \$ 5.8   |

## FY 2006 Schedule/Cost Performance (\$M)

|              |                                       | Budgeted<br>Cost of<br>Work<br>Scheduled | Budgeted<br>Cost of<br>Work<br>Performed | Actual Cost<br>of Work<br>Performed | Schedule<br>Variance \$ | Schedule<br>Variance<br>% | Cost<br>Variance \$ | Cost<br>Variance<br>% | Budget At<br>Completion |
|--------------|---------------------------------------|--|--|-------------------------------------|-------------------------|---------------------------|---------------------|-----------------------|-------------------------|
| RL-0012      | SNF<br>Stabilization &<br>Disposition | \$7.1                                    | \$7.6                                    | \$7.4                               | \$0.6                   | 7.9%                      | \$0.2               | 2.5%                  | \$119.9                 |
| <b>Total</b> |                                       | <b>\$7.1</b>                             | <b>\$7.6</b>                             | <b>\$7.4</b>                        | <b>\$0.6</b>            | <b>7.3%</b>               | <b>\$0.2</b>        | <b>2.5%</b>           | <b>\$119.9</b>          |

Numbers are rounded to the nearest \$0.1M and include the closure services allocation.

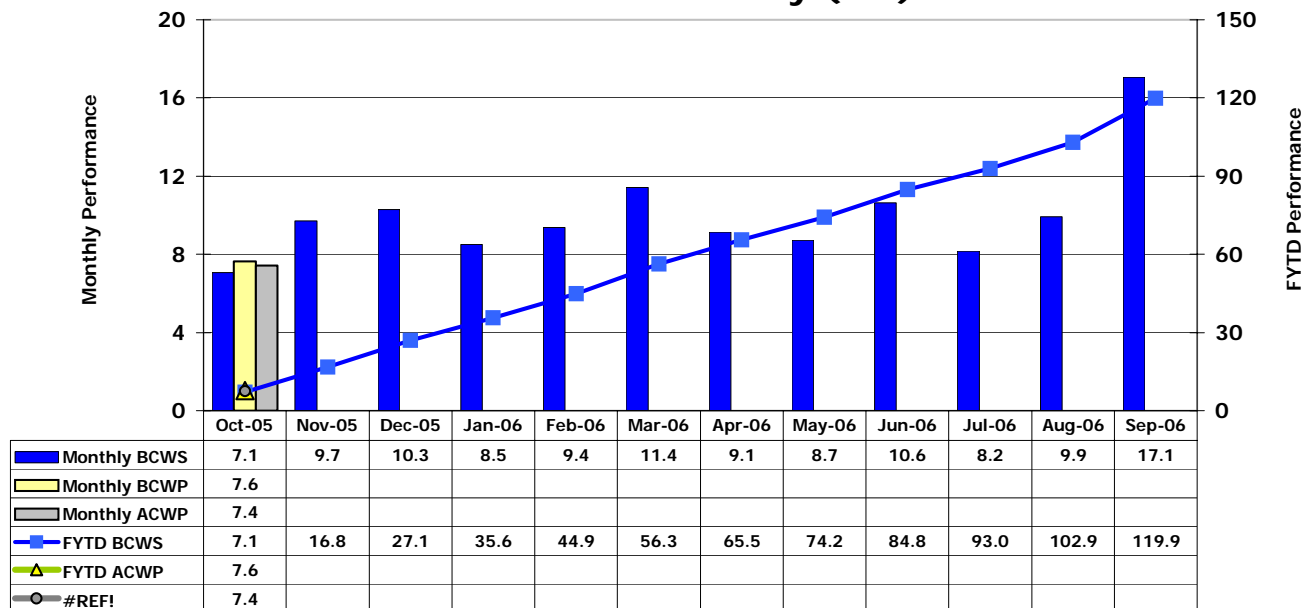
**Schedule Performance (+\$0.6M+7.3%):** The variance is due to:

- K East and K West Rack and Debris removal ahead of plan (+\$0.5M)
- BNGA design work ahead of schedule (+\$0.1M)
- D&D Discharge Chute fixative completed early (+\$0.1M)
- Miscellaneous delays (-\$0.1M)

**Cost Performance (+\$0.2M/+2.5%):** The variance is due to:

- Labor accrual adjustments for FY 2005 yearend accruals and NOC staffing level higher than planned (-\$0.2M)
- CSB charges to KBC; being corrected (-\$0.1M)
- K East and K West Rack and Debris removal costing less than plan (+\$0.4M)
- IXMs charged earlier than planned (performance not fully statused (-\$0.1M)
- Uncosted subcontractor support for Sludge Treatment (+\$0.2M)

## Performance Analysis FYTD and Monthly (\$M)



## Milestone Achievement

| Number                                    | Milestone Title  | Type (TPA/PI/DNFSB) | Due Date   | Actual Date | Forecast Date | Status / Comments |
|---|--|---------------------|------------|-------------|---------------|-------------------|
| M-034-18B<br>(S00-00-902)<br>(S10-05-012) | Complete removal of all K Basin SNF                      | TPA/DNFSB/ PI       | 07/31/04   | 10/15/04    |               | Complete          |
| DNFSB 2001-1<br>(S10-05-012)              | Remove SNF from K Basins                                 | DNFSB               | 07/31/04   | 10/12/04    |               | Complete          |
| RI-12-1.aa<br>(S10-99-960)                | Complete SNF Removal from K West                         | PI                  | 08/31/04   | 10/15/04    |               | Complete          |
| RL12-1.cd<br>(S10-99-977)                 | Initiate Full Scale K East Water Removal                 | PI                  | 09/30/04   | 09/19/04    |               | Complete          |
| M-034-33A<br>(S10-05-009)                 | Initiate Sludge Containerization                         | TPA                 | 10/31/04   | 10/31/04    |               | Complete          |
| DNFSB 121<br>(S10-05-013)                 | Select Sludge Treatment Method                           | DNFSB               | 11/30/04   | 11/15/04    |               | Complete          |
| RL-12-1.c<br>(S10-99-966)                 | Complete K East Discharge Chute Immobilization           | PI                  | 12/30/04   | 08/20/04    |               | Complete          |
| DNFSB 119E<br>(S10-05-014)                | Complete K East Sludge Consolidation                     | DNFSB               | 12/31/04   |             | 10/31/06      | Behind Schedule   |
| M-034-33B<br>(S10-05-018)                 | Complete K East Sludge Containerization                  | TPA                 | 03/01/05   |             | 10/31/06      | Behind Schedule   |
| S10-99-80                                 | Complete MCO Welding                                     | PI                  | 06/30/05   | 06/16/05    |               | Complete          |
| DNFSB 120E<br>(S10-05-015)                | Complete K East Basin Sludge Removal                     | DNFSB               | 07/31/05   |             | 05/31/07      | Behind Schedule   |
| RL-12-1.b<br>(S10-99-082)                 | Transfer K East Sludge to K West Containers              | PI                  | 11/30/05 * |             | 05/31/07      | Behind Schedule   |
| RL-12-1.bb<br>(S10-99-963)                | Transfer Found Fuel and Fuel Scrap from K East to K West | PI                  | 11/30/05 * |             | 11/09/06      | Behind Schedule   |
| M34-21-T1<br>(S10-99-951)                 | Initiate Full Scale K West Basin Water Removal           | TPA                 | 12/31/05   | 09/26/05    |               | Complete          |
| RL-12-1.cg<br>(S10-99-973)                | Immobilize K West Discharge Chute                        | PI                  | 12/31/05   | 09/26/05    |               | Complete          |
| M-034-34<br>(S10-05-010)                  | Complete Removal of K East Sludge                        | TPA                 | 01/31/06   |             | 05/31/07      | Behind Schedule   |
| RL-12-1.ch<br>(S10-99-976)                | Complete Removal of Contaminated Fuel Canisters          | PI                  | 01/31/06   | 06/21/05    |               | Complete          |
| RL-12-1.ce<br>(S10-99-978)                | Complete K East Water Removal                            | PI                  | 01/31/06   |             | 11/02/07      | Behind Schedule   |
| DNFSB 119W<br>(S10-05-016)                | Complete K West Sludge Containerization                  | DNFSB               | 02/28/06   |             | 07/31/07      | Behind Schedule   |
| RL-12-1.ca<br>(S10-99-967)                | Encapsulate 3 K East Bays                                | PI                  | 02/28/06   |             | 11/02/07      | Behind Schedule   |
| RL-12-1.bd<br>(S10-99-965)                | Commencement of Floor and Canister Sludge Treatment      | PI                  | 07/31/06 * |             | 10/27/08      | Behind Schedule   |
| RL-12-1.cb<br>(S10-99-968)                | Remove K East Superstructure                             | PI                  | 06/30/06   |             | 08/14/08      | Behind Schedule   |
| M-034-35<br>(S10-05-011)                  | Containerize K West Sludge                               | TPA                 | 06/30/06   |             | 07/31/07      | Behind Schedule   |
| RL-12-1.cc<br>(S10-99-969)                | Complete First K East Basin Section Disposal             | PI                  | 07/31/06   |             | 12/12/08      | Behind Schedule   |
| RL-12-1.ci<br>(S10-99-971)                | Decon/Immobilize K West Basin Wall (7600 sq. ft.)        | PI                  | 08/31/06   |             | 12/28/09      | Behind Schedule   |
| RL-12-1.bc<br>(S10-99-081)                | Remove Found Fuel and Scrap                              | PI                  | 09/30/06   |             | 06/06/08      | Behind Schedule   |
| RL-12-1.cf<br>(S10-99-972)                | Complete K East Basin Removal                            | PI                  | 09/30/06   |             | 07/07/09      | Behind Schedule   |

**NOTE:** Forecast dates reflect revised KBC baseline.